

ROWAN UNIVERSITY CURRICULUM PROPOSAL

(2)

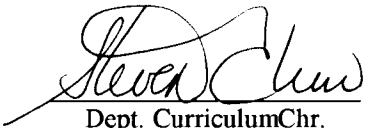
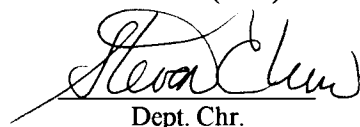
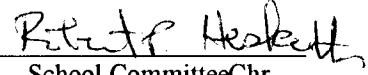
PROPOSAL TITLE
Junior Engineering Clinic I

CHECK APPROPRIATE: UNDERGRADUATE GRADUATE 3 SEMESTER HOURS

SPONSOR(S): College of Engineering Curriculum Committee

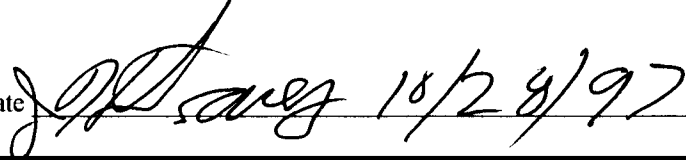
DEPARTMENT/TELEPHONE # Dean's Office/256-4670

CHECK ONE: COURSE MINOR PROGRAM CONCENTRATION SPECIALIZATION
 ACHIEVEMENT CERTIFICATE CERTIFICATION PROGRAM MAJOR PROGRAM

<p>Step #1 (Department)</p> <p><u>10/24/97</u> Approved (Date) <input type="checkbox"/> Not Approved (Date)</p> <p style="text-align: center;"> Dept. CurriculumChr.</p> <p style="text-align: center;"><u>10/24/97</u> Reviewed (Date)</p> <p style="text-align: center;"> Dept. Chr.</p>	<p>Step #2 (Receipt)</p> <p style="text-align: center;"><u>SCC# 97-98-172</u></p> <p style="text-align: center;"><u>10-24-97</u> Date Received Senate</p> <p style="text-align: center;">_____ Senate CurriculumChr.</p>	<p>Step #3 (School)</p> <p style="text-align: right;">Reviewed Date: <u>10/24/97</u></p> <p><input checked="" type="checkbox"/> Recommend to Approved <input type="checkbox"/> Recommend NOT to Approve</p> <p>Forward for Open Hearing: <input checked="" type="checkbox"/> WITHOUT Reservations <input type="checkbox"/> WITH Reservations:</p> <p>Comments:</p> <p style="text-align: right;"> School CommitteeChr.</p>
--	---	--

Step #4 (Academic Dean): Recommended NOT Recommended Conditionally Recommended (See Comments)

Comments:


Dean Signature/Date:  10/24/97

Step #5 (Senate Curriculum Committee) Open Hearing Date: _____ Approved by Curriculum Committee Date _____

Returned to Sponsor(s) for the following reason:

6 (Senate) Date announced/voted on at Senate 12/16 If voted on: Approved NOT Approved

Date forwarded to Executive Vice President/Provost 3/5/98

Senate Curriculum Committee chair Signature/Date:  3/4/98

Step #7 (Executive Vice President/Provost): Date Received 3/9/98

Approved

NOT Approved If no, reasons are as follows:

Student Credit Hours 3

Faculty Load Hours _____

Equalized Credit Hours _____

Official Copy & Approval Sheet Filed (Date) 3/9/98

Executive Vice President/Provost Signature (Signature)

Registrar

Date Approved Course Description Received 3/12/98

Hegis Taxonomy and Course Number Assigned 0901-301

Date/Signature of Registrar (Signature)

Notification Forward:

_____ Senate Curriculum Committee Chairperson

_____ Department Chairpersons

_____ Academic Dean(s)

_____ Registrar

_____ Sponsor(s)

Course Proposal:

1. Details:

- a) Course Titles: Junior Engineering Clinic I
- b) Sponsor: College of Engineering Curriculum Committee
- c) Credit Hours: 3 credit hours
- d) Course Level: Junior
- e) Curricular Effect: Required sequence of courses for all undergraduate engineering students
- f) Prerequisites: Freshman Engineering Clinic I, Freshman Engineering Clinic II, Sophomore Engineering Clinic I, and Sophomore Engineering Clinic II; or permission of instructor
- g) Suggested Time/
Scale of Implementation: Approximately 25 junior project teams

h) Resources:

Faculty: Existing faculty and new faculty to be hired over the next three years will teach this course.

Library: Library acquisitions may be required on a project-by-project basis.

Equipment: Laboratory equipment and supplies may be required on a project-by-project basis.

Computers: Computer access will be required for most project. Acquisition, training, and utilization of professional software packages may be required on a project-by-project basis.

2. Rationale:

The goal of this sequence of courses is to give teams of undergraduate engineering students a meaningful, leading-edge, team-based research and design experience. The proposed sequence of courses is designed to give the four engineering programs (Chemical, Civil, Electrical, and Mechanical) the necessary flexibility for the formation, monitoring, and success of junior and senior research and design projects.

Each program will formulate guidelines for the projects sponsored by that department and for the participation of their students in projects sponsored by other departments. In this way, this sequence of courses will satisfy all of the requirements as specified by the Accreditation Board for Engineering and Technology (ABET) for the sponsoring department. The sequence of courses will also maintain sufficient flexibility for both interdisciplinary and multi-disciplinary research and design projects.

3. Essence of the Course:

a) Objectives:

Upon completion of this sequence of courses, undergraduate engineering students working in research and design teams and guided by a faculty advisor will be able to do the following:

Conduct a thorough literature search and review.

Prepare a clear and concise problem statement.

Consult with other faculty and professional experts.

Develop and implement a detailed research and design plan.

Prepare weekly oral and/or written progress reports.

Derive publishable research and design results.

Make a final written report and oral and written presentation.

b) Topical Outline:

The research and design topic chosen by each undergraduate team will depend upon the mutual interests of the undergraduate students and their faculty advisor, and upon the requirements of the engineering department that is sponsoring the project (usually the department to which the majority of the team members and the faculty advisor belong). The sequence of courses will include the following basic components:

A thorough literature search and review.

A clear and concise problem statement.

A record of consultations with other faculty and professional experts.

A research and design plan developed and implemented in close collaboration with a faculty mentor.

A record of project development and execution including weekly progress reports.

A final set of publishable research results.

A final written report and oral presentation.

c) Evaluation and Grading Procedure of Students:

Evaluation of team progress will be made on a weekly basis by the faculty advisor and on a monthly basis by the chair of the sponsoring department. The appropriateness of the research and design content of each project will be determined each semester by the faculty of the sponsoring department (acting as a committee of the whole). Students working on inter-disciplinary and multi-disciplinary projects sponsored by other departments will also be required to report to their department chairs on a monthly basis and to the faculty of their department (acting as a committee of the whole) each semester .

d) Course Evaluation:

The proposed courses will be evaluated based on student evaluations and curriculum review conducted by each department.

4. Results of Consultations:

The proposed sequence of courses will be required for all undergraduate students in the College of Engineering. This sequence is consistent with the engineering curricula that were approved by the University Senate in December 1994 and the revised curricula that were approved in June 1996. Consultations were submitted with the original proposals and the revised proposals as specified by the Senate Curriculum Committee.

Catalog Description:

Junior Engineering Clinic I (0901.301)

Prerequisite: Freshman Clinic I (0901.101), Freshman Clinic II (0901.102), Sophomore Clinic I (0901.201), Sophomore Clinic II (0901.202); or permission of instructor

This is one course in a sequence of courses that will provide a meaningful research and design experience for a team of undergraduate students under the direction of an engineering faculty advisor. The research topic will be chosen by mutual agreement of the undergraduate students and their advisor. The sequence will include a thorough literature search and review, the development of a clear and concise problem statement, consultations with other faculty and professional experts, and the derivation of publishable results. The research will culminate in a final written report and oral presentation.